

## Claims

What is claimed is:

1           1.     A method, comprising:  
2           asserting an edge-triggered interrupt signal to a processor; and  
3           delivering an interrupt pending signal from the processor to a power management  
4     device.

1           2.     The method of claim 1, further comprising the power management device  
2     causing the processor to enter a high power state if the processor is in a low power state  
3     when the processor delivers the interrupt pending signal to the power management  
4     device.

1           3.     The method of claim 2, wherein delivering an interrupt pending signal  
2     includes delivering the interrupt pending signal from the processor to the power  
3     management device over a single signal line coupled between a single processor pin and  
4     the power management device.

1           4.     The method of claim 3, wherein causing the processor to enter a high  
2     power state includes the power management device deasserting a stop clock signal.

1           5.     A method, comprising:  
2           asserting an edge-triggered interrupt signal to a processor;

3            setting a bit within the processor indicating that an interrupt is pending; and  
4            polling the processor to determine if an interrupt is pending.

1            6.        The method of claim 5, wherein polling the processor to determine if an  
2            interrupt is pending includes polling the processor to determine if an interrupt is pending  
3            only if the processor is in a low power state.

1            7.        The method of claim 6, further comprising causing the processor to enter a  
2            high power state if the polling of the processor reveals that an interrupt is pending.

1            8.        The method of claim 7, wherein causing the processor to enter a high  
2            power state includes deasserting a stop clock signal delivered from a power management  
3            device to the processor.

1            9.        A system, comprising:  
2            a processor including a local interrupt controller and an interrupt pending signal  
3            output;  
4            an input/output interrupt controller coupled to the processor, the input/output  
5            interrupt controller to deliver an edge-triggered interrupt signal to the processor; and  
6            a power management device including an interrupt pending signal input coupled  
7            to the interrupt pending signal output of the processor, the processor to assert the interrupt  
8            pending signal in response to the delivery of the edge-triggered interrupt signal.

1           10.     The system of claim 9, wherein the processor further includes a stop clock  
2     signal input, the processor to cease executing instructions in response to an assertion of  
3     the stop clock signal by the power management device.

1           11.     The system of claim 10, the power management device to cause the  
2     processor to enter a high power state if the processor is in a low power state when it  
3     asserts the interrupt pending signal.

1           12.     The system of claim 11, wherein the power management device causes the  
2     processor to enter the high power state by deasserting the stop clock signal.

1           13.     A power management device, comprising:  
2             an interrupt pending signal input, an assertion of the interrupt pending signal to  
3     indicate that a processor has an interrupt pending; and  
4             a processor power management signal output, the power management device to  
5     cause the processor to enter a high power state by signaling to the processor to enter the  
6     high power state via the processor power management signal if the processor is in a low  
7     power state when it asserts the interrupt pending signal.

1           14.     The power management device of claim 13, wherein the processor power  
2     management signal is a stop clock signal, and further wherein the power management  
3     device causes the processor to enter a high power state by deasserting the stop clock  
4     signal.

